

BUREAU OF HOME FURNISHINGS AND THERMAL INSULATION

FINAL STATEMENT OF REASONS

Hearing Date: April 22, 2003 in San Francisco and April 24, 2003 in Diamond Bar.

Sections Affected: Division 3, Title 4, California Code of Regulations, Article 13,
Sections 1371 and 1373.1.

Updated Information

The Initial Statement of Reasons is included in the file. The information contained therein is updated as follows:

1. The word "residential" was deleted from the title of Technical Bulletin 605.
2. The correction of the total heat release rate of the burners to 29 kilowatts and a sentence regarding burner production was added to the technical bulletin on page 9.
3. Deletion of the word "tape" in footnote #9 on page 10 of the technical bulletin.
4. The test duration in Technical Bulletin 603 was changed from 60 minutes to 30 minutes shown on pages 1, 14, and 15 in the test criteria.
5. The maximum rate of heat release in Technical Bulletin 603 was changed from 150 kilowatts to 200 kilowatts shown on page 15 of the test criteria.
6. A non-substantive calibration adjustment was made on page 13 of the Technical Bulletin 603. Reportedly most of the testing laboratories were facing serious difficulties in creating and maintaining a 300 kilowatts fire for this calibration using Propane gas. Therefore, this minor technical adjustment was made in the system calibration procedure and has no bearings on the test method itself, i.e., the test set up and procedure, the impingement of the dual burners on the test specimen and the test criteria.
7. Typographical correction made on page 15 of the test criteria to replace "maximum" with "peak" rate of heat release.
8. Redundant use of "or greater" deleted from page 15 of the test criteria.

The Bureau held two public hearings and one 15-day public comment period enlisting comments from the public and industry representatives during the regulatory review process. The comments and actions from the public hearings follow.

Local Mandate

A mandate is not imposed on local agencies or school districts.

Business Impact

This regulation will not have an unduly burdensome impact on businesses. This determination is based on the following facts or evidence/documents/testimony:

Numerous fact finding meetings and discussions have been held with the mattress industry, suppliers in the United States and abroad, and related industries, who have indicated that adverse long-term economic impact is not a major issue. The strategy that will most likely be used to employ the new standard will be the use of flame-blocking barriers and fire retardant threads and fasteners used to encase the core filling materials. The Bureau received testimony and data that indicates technologically improved materials are available in adequate quantities that can be used to comply with TB 603.

While the cost of these supplies is not unreasonable to the manufacturers, there will be some additional raw material and labor costs incurred to add the fire barriers. Because national mattress manufacturers are adopting the standard for their complete line of products, the incentive for the suppliers is to produce and make available fire retardant supplies in sufficient quantities and at a price that is cost effective for all manufacturers. Every manufacturer must comply with the requirements of TB 603 and the most efficient use of component products will prevail. Additional research and product development will spur innovation and lower the cost of complying with the standard.

Fiscal Impact on Public Agencies Including Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None

Costs Impact on Private Persons or Entities:

Testimony and data received during the public comment period indicates that there will be some cost impact to the consumers who will be purchasing the new compliant mattresses. However, since the industry will be providing a safer product for the consumer, it will seek the most cost-effective way to do that to keep their market share. Every manufacturer must comply with the requirements of TB 603 and the most efficient use of component products will prevail. Additional research and product development will spur innovation and lower the cost of mattresses that comply with the new safety standard.

Consideration of Alternatives:

No reasonable alternative to the regulation would be either more effective in carrying out the purpose for which the action is proposed, or would be as effective and less burdensome to affected private persons than the proposed regulation.

Objections or Recommendations/Actions:

The Bureau received a number of written and verbal comments at the public hearings held in San Francisco on April 22, 2003 and in Diamond Bar (Los Angeles area) on April 24, 2003. The following is a summary of the comments/recommendations made and the Bureau's proposed action. Each commentor was assigned a number for brevity in identification throughout the document.

A. Letters and/or oral testimony from the following companies with the same recommendations:

1. **California Retailers Association (Pamela Boyd Williams, Vice President)**
2. **The International Sleep Products Association and The Sleep Products Safety Council (Gene Livingston, Livingston & Mattesich Law Corporation)**

3. Kolcraft Enterprises, Inc., Ted Bretschger, Sr. Vice President of R & D
4. Omega Point Laboratories, Inc. (William E. Fitch, P.E. Executive VP
5. Sealy, Inc. (Richard D. Martland & Gene Erbin, Nielsen, Merksamer, Parrinello, Mueller & Naylor, LLP
6. Simmons Company (Peter H. Weiner, Paul, Hastings, Janofsky & Walker, LLP)
7. Underwriters Laboratories, Inc. (Robert Backstrom, Engineering Group Leader, Fire Protection Division)
48. Royal Mattress, Ron Hoestery
49. Precision Fabrics Group, Inc.
50. California Furniture Manufacturers Association, Ben Nielsen
51. Eastman House of California, Neil Friedman

RECOMMENDATION: Commentors (#1- #7) oppose the TB 603 test criteria that states a mattress, futon, or a box spring set fails to meet the requirements of the test procedure if a peak heat release rate of 150 kilowatts is achieved. The commentors recommend the peak heat release rate be increased to 250 kilowatts.

ACTION: The recommendation of a 250 kilowatts peak heat release rate was rejected because the Bureau believes it is too high. Proposed action was modified to a peak heat release rate of 200 kilowatts because the Bureau agrees with the data provided by the commentors that the 150 kilowatts peak heat release rate is conservative and can be raised while maintaining the safety levels of the test. The goal of the TB 603 standard is to better protect consumers in a home environment, specifically a bedroom environment. Homes are basically “unregulated” environments from a fire safety standpoint and contain large volumes of easily ignited combustibles, in intimate or close contact with each other. While no product fire standard can address every fire scenario, a conservative value for peak heat release rate was originally proposed by the Bureau to provide an added fire safety margin for consumers. Given the need to comply with the standard and the fact that there is a 20% tolerance in accuracy of measurement for this test, manufacturers should design their products to target approximately 160 kilowatts heat release.

National Fire Protection Association Life Safety Code 101 specifies a peak heat release rate of 250 kilowatts for mattresses used in health care occupancies. However, these facilities include state of the art sprinkler systems, smoke detectors, flame-resistant bedclothing, a limitation on the amount of combustibles, refined exit plans, and mandatory fire marshal inspections on a regular basis. These features are not usually present in the home environment, especially in the vulnerable populations of elderly and low-income. Thus, the Bureau modified the test criteria to 200 kilowatts because it will still provide an improvement in the fire safety of mattresses over the current product available in the market and will satisfy the industry’s concerns.

RECOMMENDATION: Commentors #1- #7 and #33 oppose the 60-minute test duration time stated in the test criteria and recommend that it be reduced to 30 minutes.

ACTION: This recommendation was accepted and proposed action was modified to a 30-minute test duration time because the Bureau acknowledges the 30-minute test duration still represents a ten-fold increase in response and escape time while recognizing the concerns of industry.

The Bureau based the originally proposed test duration time of 60 minutes on the current Technical Bulletin 129 (TB 129) standard for public occupancy mattresses, that uses a one-hour observation time. TB 129 was developed recognizing that a developing fire may move toward or exceed flash over at any time during a one-hour period. Therefore, the Bureau proposed a standard that provided the same level of open-flame resistance for mattresses purchased by all California consumers as is currently used for live-in public occupancies.

However, the Bureau also recognizes that the first few minutes after an open ignition of a mattress represents a critical time window during which a mattress set may self extinguish, burn moderately, or move rapidly to flash over. Bureau research shows that mattresses in the California market at this time can ignite rapidly with a flame and produce a deadly flash over fire in approximately 3 minutes. Therefore, the modification to a 30-minute test duration time will still result in a significant increase in bedroom fire safety for California consumers.

Public testimony also included arguments that prototype testing by industry demonstrates the lack of available materials that would ensure compliance with a 60-minute test. Although the Bureau is confident that mattresses can be constructed to comply with a 60-minute test, we are not in a position to question testimony from the manufacturing industry regarding the end product costs associated with compliance. While a 60-minute test duration provides a longer time for recognition, emergency notification and escape, there is an inherent increase in the cost of testing the products for the manufacturers. The Bureau also acknowledges the concerns of the industry regarding the availability of cost-effective materials that do not compromise comfort and aesthetics to meet the standard.

RECOMMENDATION: Commentors (**#1- #7and #47**) believe the regulations should not be effective on January 1, 2004 as announced by the Bureau, but at a later date that allows the manufacturers to design, test, produce and distribute compliant inventory to the retailers.

ACTION: This recommendation was accepted and proposed action was modified to implement the regulations on January 1, 2005 because testimony included data that outlined 12- month timelines for industry to develop and produce products that comply with the new Technical Bulletin 603.

RECOMMENDATION: Commentors (**#1- #7**) believe the Bureau should not adopt an open-flame ignition standard for mattresses without adopting the flammability standard for bedclothing at the same time.

ACTION: This recommendation was rejected because the Bureau has insufficient laboratory space, equipment and employee resources to gather effective scientific data on both mattresses and bedclothing at the same time. The Bureau is mindful of the legislative mandate to promulgate regulations for both mattresses and bedclothing and is coordinating the adoption of both regulations. Technical Bulletin 604, entitled "Requirements and Test Procedures for Resistance of Bedclothing Products to Open-Flame", is currently being developed by the Bureau and the rulemaking will be noticed in September 2003. The Bureau has been working with both mattress and bedclothing task force members to include all stakeholders in the process and develop standards that meet the requirements of the law and do not unduly burden the industry or provide unsatisfactory products for the consumer.

RECOMMENDATION: Commentor **#2** urges the Bureau to base its regulatory standard on evidence in the record.

ACTION: Although the rulemaking record is still open with the option to augment the file as the process moves forward, the Bureau thanks the commentor for bringing to attention that all the laboratory data was not in the rulemaking file. The data was and is available and submitted as part of this rulemaking file. It was inadvertently not included in the documents that the commentor copied, but available in the laboratory files.

RECOMMENDATION: Commentor #3 is concerned with the current proposal of a pass/fail criterion based on a peak rate of heat release of 150 kilowatts and how that relates to crib mattresses.

ACTION: This recommendation is acknowledged by the proposed action to modify the test criteria to a 200 kilowatts peak heat release rate.

Because a crib mattress generally contains a lower volume of fuel load (combustibles) most of them should be able to comply with the maximum of peak heat release of 200 kilowatts as proposed in the modified test criteria and the total heat release of the criteria.

With regard to minimizing the peak heat release rate of the entire room to the range of 400-500 kilowatts, this is highly dependent on the potential heat release of the bedclothing and that of the mattress/foundation set, considered separately and as one system or ensemble. While there may not be enough potential heat in a twin bedclothing ensemble to generate a 500 kilowatts fire, peak heat release rates for conventional (non flame-resistant) bedclothing ensembles may easily fall in the 100 to 250 kilowatts range. During a developing flaming bedroom fire, if the peak heat releases of the bedclothing and the mattress set occur simultaneously, the 500 kilowatts danger threshold may be exceeded.

Thus, one goal of the TB 603 standard is to minimize the size of the mattress peak heat spike and to delay it in time, so that the bedclothing and mattress peaks do not occur simultaneously. This can lessen the probability of bedroom flashover or at least delay its onset. Thus, while 250 kilowatts is a conservative number for a health care environment, it must be viewed in the light of the potential for interactions of the mattress set with other combustibles in the bedroom environment which result in rapid heat output leading to flashover.

The Bureau has seen little or no evidence that meeting a 200 kilowatts criteria will force the use of less resilient foam fillings causing consumers to supplement the comfort of infant and children's bedding by using comforters and pillows over the mattresses and thus raising suffocation or secondary fire potential. This is not the intent of the standard. Our data shows that adult mattresses, which are typically much larger than children's, can meet the standard with peak heat release rate typically in the 75-100 kilowatts range if properly constructed. Thus, smaller mattresses should exhibit lower peaks and total heat outputs. TB 603 failure tends to occur most often due to an improperly closed seam or tape edge or the use of non flame-resistant threads and edging material, regardless of the type of fill present. Use of a weak flame-blocking barrier that undergoes physical degradation as continual heat is applied may also contribute but we have little evidence that low resiliency (highly flame-resistant) foams are needed to comply and relatively few tests on foam-core mattresses.

RECOMMENDATION: Commentor #3 is concerned about the increased costs of crib mattresses constructed to meet the test standard.

ACTION: It is understood that some increased costs will be incurred by industry to comply with this standard, but the marketplace competition will drive the cost to the lower level. Every manufacturer must comply with the requirements of TB 603 and the most efficient use of

component products will prevail. Additional research and product development will spur innovation and lower the cost of complying with the standard.

RECOMMENDATION: Commentor #3 states that safety regulations that marginally improve the safety of a product but also significantly increase the cost of the product can result in a decrease of overall safety.

ACTION: IRRELEVANT. The Bureau does not consider the fire safety improvement provided by TB 603 to be *marginal* given that TB 603 makes full fire involvement of a mattress set much less likely when ignited with an open flame. While cigarette resistant, current mattresses have no resistance to open flame and can flashover in 2-3 minutes.

RECOMMENDATION: Commentor #3 states that a pass/fail peak heat release criterion of 150 kilowatts will require mattress manufacturers to use exterior components, e.g. covers, thread, and seam bindings, treated with flame retardant chemicals while a peak heat release of 250 kilowatts would not.

ACTION: This recommendation was rejected because the Bureau has no significant evidence that setting of a lower peak heat release rate criterion than 250 kilowatts will require mattress manufacturers to use covers, threads and seam bindings treated with flame retardant chemicals. Technologies are available to seal the mattresses with barriers that do not rely on flame-retardant chemicals. Surface tickings in most mattresses tested by the Bureau to date have not changed. New threads and tape edge bindings to fasten barrier cloths are made from inherently flame-resistant fibers such as aramids and are not treated with flame retardant chemical sprays or topical treatments. And the flame-blocking barriers are not in physical contact with human skin and generally do not use flame retardant chemical treatments but flame-resistant, engineered fibers. Although the Bureau is well aware of potential health effects of brominated flame retardant chemicals, it regulates performance standards for fire safety and does not specify product components or how to construct products for compliance.

RECOMMENDATION: Commentor #4 urges the Bureau to question the reliability of test results coming from laboratories not accredited by ISO Standard.

ACTION Not all laboratories conducting home furnishings flammability tests in the United States are accredited by an international body like International Standards Organization (ISO). The Bureau recognizes the value of establishing comprehensive laboratory accreditation programs for this and other home furnishings standards. This accreditation will improve laboratory repeatability and reproducibility, will set a baseline for quality of test equipment, personnel and procedures and provide a more robust test standard. However, current time and monetary constraints preclude the Bureau from establishing this accreditation within the time frame of the rulemaking.

To move towards a more formal accreditation process, the Bureau is participating with several other laboratories that do TB 603 testing to do an inter-laboratory study of the precision and bias of TB 603.

OBJECTION: Commentor #6 objects to the Bureau's proposed standard because he says it will result in uncomfortable and unnecessarily expensive products for the consumer.

ACTION: The Bureau has allowed an additional year before the new test standard is enforced that provides industry time to conduct research and development on the fire-resistant mattress that meets the comfort and marketing requirements and is cost effective.

RECOMMENDATION: Commentors **#2 and #6** recommend the Bureau acknowledge in the language of the proposed regulation that they are preempted by the Federal Fabric Flammability Act and that the effective date of the regulations will not occur until after an exemption has been promulgated by the CPSC.

ACTION: While the Bureau recognizes the potential issue with a federal exemption, legal opinions on the subject are varied. Therefore, the Bureau is considering its course of action.

OBJECTION: Commentors **#2, #5, #6, 48, #50, and #51** state that the proposed regulation will harm multiple California industries with loss of jobs.

ACTION: The reasons the commentors gave for loss of industry jobs included a short implementation time (January 1, 2004) and the length of the test duration (60 minutes). Both issues have been resolved with the proposed action of modified language and test criteria.

OBJECTION: Commentor **#5** objects to the absence of any test to validate the accuracy of the two-burner test.

ACTION: To move towards a more formal accreditation process, the Bureau is participating with several other laboratories that do TB 603 testing to do an inter-laboratory study of the precision and bias of TB 603

OBJECTION: Commentor **#5** objects to the possibility that the industry's workers and customers may be exposed to irritants and ever more serious health problems as the industry rushes to manufacture products compliant with the severely over-stringent regulation.

ACTION: Although the Bureau is very sensitive to the concern of everyone regarding the use of toxic chemicals in the production of consumer goods, we regulate performance standards and do not make recommendations regarding the components used in the construction of products. The Bureau would never knowingly support the use of any chemical known to be environmentally unsafe. Many of the available materials for meeting an open-flame standard for mattresses have been in the market for 25 years for use in public occupancies and have prevented numerous fire deaths and injuries. Current worker safety and environmental laws in the United States address worker and consumer exposure to chemicals. No chemical may enter the US market without extensive assessment and testing. In addition, many of the materials developed for use in this standard are fire-blocking barrier fabrics not in contact with the human body and present minimal environmental exposure hazards to workers or consumers. Numerous suppliers testified at the public hearings that their products are environmentally safe.

RECOMMENDATION: Commentor **#7 and #48** expressed concern for the number and the capacity of test service providers to validate conformity to the new regulation.

ACTION: Currently, there are 6 laboratories in the United States capable of performing this test. In addition, at least one lab is building a second test facility to allow double capacity. Based on requests for testing at our lab to date, the demand for testing has not been overwhelming. With time, demand should soften as more products comply.

RECOMMENDATION: Commentor **#7** expresses an environmental concern regarding the thermal smoke abatement systems that require a warm-up period prior to operation and will cut into the time available for testing.

ACTION: The Bureau stresses that all tests for TB 603 should be performed with the safety of the test engineers and other building occupants as highest priority. Cycle times between tests should

be made as long as needed to prevent chronic or acute injury to employees and generate accurate test data.

RECOMMENDATION: Commentor **#7** expresses concern about the consistency of the data developed to demonstrate compliance to TB 603.

ACTION: The Bureau recognizes the inherent precision and bias in a large-scale calorimetry test of this nature on a finished product consisting of multiple components. To address concerns about lack of repeatability and reproducibility with this standard, the Bureau and the Sleep Products Safety Council will be conducting an inter-laboratory study of the Technical Bulletin 603 standard, using established ASTM methods. A number of laboratories plan to participate.

RECOMMENDATION: Commentor **#7** recommends a certification of test service as a means to assure consistent application of TB 603.

ACTION: The Bureau recognizes the value of establishing comprehensive laboratory certification programs for this and other home furnishings standards. This certification will improve laboratory repeatability and reproducibility, will set a baseline for quality of test equipment, personnel and procedures and provide a more robust test standard. However, current time and monetary constraints preclude the Bureau from establishing this certification within the time frame of the rulemaking.

To move towards a more formal certification process, the Bureau is participating with several other laboratories that do TB 603 testing to do an inter-laboratory study of the precision and bias of TB 603.

B. Letters and/or oral testimony from the following companies with the same recommendations:

8. H3 Environmental Interior Design, Jeremy Singleton
9. Lifekind Products, Walter L. Bader
10. Lifekind Products, Chanel Bishton
11. Royal Pedic Mattress, Tony Kelemen
40. European Sleep Works, Michael Lavin
48. Royal Mattress, Ron Hoestery
49. Custom Rest Bedding, Steve Carwile
49. California Furniture Manufacturers Association, Ben Nielsen
53. Sleep Mechanics, Linc Hearst

RECOMMENDATION: Commentors **#8, 9, 10, 11, 40, 48, 49, 50 and 53** all expressed concerns regarding the use of toxic chemicals in fire resistant components used to comply with fire safety standards.

ACTION: This recommendation was rejected because although the Bureau is very sensitive to the concern of everyone regarding the use of toxic chemicals in the production of consumer goods, we regulate performance standards and do not make recommendations regarding the components

used in the construction of products. Many of the available materials for meeting an open-flame standard for mattresses have been in the market for 25 years for use in public occupancies and have prevented numerous fire deaths and injuries. Current worker safety and environmental laws in the United States address worker and consumer exposure to chemicals. No chemical may enter the US market without extensive assessment and testing. In addition, many of the materials developed for use in this standard are fire-blocking barrier fabrics not in contact with the human body and present minimal environmental exposure hazards to workers or consumer. Numerous suppliers testified at the public hearings that their products are environmentally safe.

RECOMMENDATION: Commentors **#8, 9, 10, 11, and 40** recommend adding language that recognizes chemically sensitive consumers and other concerned individuals.

ACTION: This recommendation was rejected because the federal standard, 16 CFR, 1632.31 exempts physician prescribed mattresses and mattress pads for the treatment or management of a named individual's physical illness or injury.

C. Letters and/or oral testimony from the following companies with the same objections:

12. **Bruce Glassman, Independent Sales Representative of mattresses/futons**
13. **American National Manufacturing, Inc., Craig Miller, Jr.**
14. **American Textile Tape, Inc., Temy Nguyen, President**
15. **Frank & Sons, Frank Ortiz**
16. **Gateway Mattress Company, Inc. Donald F. Franco, Jr., Vice-President**
17. **Hickory Springs Manufacturing Co, Bobby Bush, VP Foam Products Div.**
18. **MBC Mattress Company, Inc., Brian Gargalis, Owner and General Manager**
19. **Reliable Tape Products, Shirley Chua**
20. **Sleep Train Mattress Centers, Dale R. Carlsen, President**

OBJECTION: Commentors **#13 through #20** express concern that compliance with the new TB 603, open-flame ignition standard for mattresses, futons, and box/spring sets, will cause financial hardship for small manufacturers because:

- (a) They will be required to produce one kind of mattress for California to meet the TB 603 standard and another to sell outside the state.
- (b) They will be required to manufacture products used only for California compliant mattresses, which will increase staff and inventory to keep the product separate from that produced for the rest of the country.
- (c) The production of their product to comply with TB 603 will raise the cost of the end product and consumers will put off buying new mattresses.

ACTION: This recommendation was rejected because the above listed reasons (a, b, and c) for objecting to AB 603 are not specifically directed to the rulemaking language or the test standard mandated by that legislation. Issues regarding the legislation must be addressed to the legislature, therefore, the Bureau cannot address these objections in this forum.

OBJECTION: Commentors **#12 through #20** state that compliance with the new TB 603, open-flame ignition standard for mattresses, futons, and box/spring sets, causes financial hardship for small manufacturers because:

- (a) Small manufacturers will not be able to absorb the cost of complying with TB 603 and will go out of business.
- (b) The cost of having mattresses tested for compliance with TB 603 will cause financial hardship.

ACTION: This recommendation was rejected because the above listed reasons (a and b) for objecting to AB 603 are not specifically directed to the rulemaking language or the test standard mandated by that legislation. Issues regarding the legislation must be addressed to the legislature, therefore, the Bureau cannot address these objections in this forum.

However, it is understood that some increased costs will be incurred by industry to comply with this standard, but the marketplace competition will drive the cost to the lower level. Every manufacturer must comply with the requirements of TB 603 and the most efficient use of component products will prevail. Additional research and product development will spur innovation and lower the cost of complying with the standard. The regulation does not require any testing of the product, but due diligence is expected to verify that the products being distributed meet the TB 603.

QUESTION: Commentor **#12** questions the fairness of only testing twin size mattresses as part of the test standard because manufacturers of other sizes could choose to not comply with the standard and the mattress will not be tested because of laboratory capacity for only testing twin size.

ANSWER: Current laboratory testing facilities in the United States cannot generally be used to test a mattress/mattress set larger than a twin size. To test a larger mattress in these facilities would endanger the safety of test operators and the building. Those producers manufacturing only full, queen, king-size mattresses must: 1) construct a mock-up of the mattress using identical construction in twin size and test it, or 2) have the larger mattress tested in a laboratory that will accommodate those mattresses safely.

QUESTION: Commentor **#12** also questions the need for a certification of compliance for manufacturers who may fall through the cracks because enforcement cannot reach everyone.

ANSWER: Enforcement of the new standard is beyond the purview of this rulemaking and will be addressed in Bureau policy.

RECOMMENDATION: Commentor **#12** recommends the Bureau develop a thorough advertising campaign to educate consumers about the new regulations for safety on mattresses so they will not buy non-compliant product.

ACTION: The Bureau recognizes the need to educate the consumer on the benefits of the mattresses constructed to meet the new standard. The outreach will be addressed by policy and will be ongoing.

QUESTION: Commentor **#12** questions the same test protocol for futons as mattresses because they do not have any cotton batting and are sold with a cover that remains on the mattress.

ANSWER: The TB 603 is a performance standard for the open-flame resistance of sleep surfaces including mattresses and futons. It does not specify the use of any material or construction parameters. Any sleep surface that meets the criteria is in compliance with the standard.

OBJECTION: Commentor **#12** objects to the financial hardship for lower income consumers because the standard will raise the price of mattresses manufactured to comply with the new regulation.

ACTION: This objection is outside the scope of the Bureau's mandate and must be addressed with the legislature.

OBJECTION: Commentor **#13** objects to the financial hardship that his company will face complying with TB 603. He recommends the Bureau postpone the TB 603 regulation and wait for the promulgation of federal regulations on open-flame ignition standard for mattresses.

ACTION: This objection is outside the scope of the Bureau's mandate and must be addressed with the legislature.

OBJECTION: Commentor **#13** is concerned with the compromise of comfort and performance for therapeutic benefits when adding a fire barrier to comply with TB 603.

ANSWER: The Bureau has allowed an additional year before the new test standard is enforced that provides industry time to conduct research and development on the fire-resistant mattress that meets the comfort, therapeutic benefits and marketing requirements and is cost effective. In addition, TB 129-mattress technology has been available for a number of years for health care that provides flame-resistance and therapeutic/ergonomic benefits.

RECOMMENDATION: Commentor **#15** recommends that the consumer take responsibility for their own safety and that a law should be passed requiring all retailers to have a fire barrier sock for each mattress available for purchase at the request of the consumer.

ACTION: This objection is outside the scope of the Bureau's mandate and must be addressed with the legislature.

OBJECTION: Commentor **#16** is concerned with the number of manufacturers who will not comply with the TB 603 and that there are not enough Bureau inspectors to enforce the law.

ACTION: The Bureau's enforcement policies are outside the scope of the proposed regulations.

RECOMMENDATION: Commentor **#16** recommends that the Bureau wait for the federal regulations or provide a new label to be attached to mattresses that indicate its flammability properties and let the consumer choose to purchase or not.

ACTION: This objection is outside the scope of the Bureau's mandate and must be addressed with the legislature.

RECOMMENDATION: Commentor **#17** recommends the test criteria apply to the most popular size of bedding (queen size) because the flammability performance of a twin size mattress when compared to a queen size is suspect.

ACTION: The National Institute of Standards (NIST) conducted research on the relative performance of queen and larger mattresses versus twin mattresses. This research verified that the open-flame resistance of a mattress can be reasonably predicted by testing a twin-size

mattress. Current laboratory testing facilities in the United States cannot generally be used to test a mattress/mattress set larger than a twin size. To test a larger mattress in these facilities would endanger the safety of test operators and the building. Those producers manufacturing only full, queen, king-size mattresses must: 1) construct a mock-up of the mattress using identical construction in twin size and test it, or 2) have the larger mattress tested in a laboratory that will accommodate those mattresses safely.

RECOMMENDATION: Commentor **#17** recommends compliance certification based on the calendar or production count and that mattress manufacturers should have specific directions in testing recurrence. Commentor recommends the Bureau should mandate a test schedule based on production volume.

ACTION: The Bureau's enforcement policies are outside the scope of the proposed regulations.

RECOMMENDATION: Commentor **#17** recommends a delay in the promulgating of TB 603 until the bedclothing regulations are enacted and a more reasonable ignition source modeled for mattresses.

ACTION: This recommendation was rejected because the Bureau has insufficient laboratory space, equipment and employee resources to gather effective scientific data on both mattresses and bedclothing at the same time. The Bureau is mindful of the legislative mandate to promulgate regulations for both mattresses and bedclothing and is coordinating the adoption of both regulations. Technical Bulletin 604, entitled "Requirements and Test Procedures for Resistance of Bedclothing Products to Open-Flame", is currently being developed by the Bureau and the rulemaking will be noticed in September 2003. The Bureau has been working with both mattress and bedclothing task force members to include all stakeholders in the process and develop standards that meet the requirements of the law and do not unduly burden the industry or provide unsatisfactory products for the consumer.

RECOMMENDATION: Commentor **#18** recommends that the test standard for TB 603 be less stringent and phased in over a period of years.

ACTION: This recommendation was accepted and the proposed action was modified to make the standard less stringent but will still provide a significant improvement in the fire safety of mattresses and also acknowledge the concerns of industry. The Bureau has also allowed an additional year before the new test standard is enforced that provides industry time to conduct research and development on the fire-resistant mattress that meets the comfort, therapeutic benefits and marketing requirements and is cost effective.

OBJECTION: Commentor **#19** objects to AB 603 legislation and the proposed regulations mandated by the legislation. The commentor is concerned about increased product liability insurance, the elimination of California based manufacturers who are 90% Hispanic and that any new jobs created by the regulation will be on the East Coast.

ANSWER: These objections are outside the scope of the Bureau's mandate and must be addressed with the legislature. The statute and regulations are racially neutral even assuming the premise that the statute may have a greater effect on the Hispanic population.

OBJECTION: Commentor **#20** is concerned that products manufactured to meet the TB 603 will feel significantly different.

ANSWER: The Bureau has allowed an additional year before the new test standard is enforced that provides industry time to conduct research and development on the fire-resistant mattress that

meets the comfort, therapeutic benefits and marketing requirements and is cost effective. In addition, TB 129-mattress technology has been available for a number of years for health care that provides flame-resistance, therapeutic/ergonomic benefits, and for use in hotel mattresses which have proven consumer acceptability.

OBJECTION: Commentor **#20** is concerned with liquidating all floor models and current inventory prior to the end of the year or the established effective date.

ANSWER: There is nothing in the proposed regulation that indicates existing inventory cannot be sold. The legislation requires that all mattresses and box springs manufactured after January 1, 2004 must meet an open flame standard specified by the Bureau. Label modifications that require the manufacturer to state the month and year the products are manufactured will clearly delineate the mattresses complying with the new standard and those that do not.

D. Letters and/or oral testimony from the following companies with the same objections:

21. IUE-CWA Local 89262, AFL-CIO, Ulises Vergara, Secretary-Treasurer

22. California Teamsters Public Affairs Council, Chuck Mack, Chairman

OBJECTION: Commentors **#21 and 22** are concerned that the adoption of TB 603 will put many of the teamsters who work for mattress manufacturers out of work. They state that the current effective date does not allow for the length of time it will take the new compliant mattresses to be designed and tested which will temporary halt manufacturing and cause lay-off in the factory.

ACTION: The development of an open flame mattress standard and the promulgation of regulations (TB 603) to enforce it is mandated by AB 603. However, based upon the comments and data received during the public comment phase of the rulemaking, the implementation date for the new standard will be January 1, 2005 as noted in the 15-day Notice of Modified Text. Testimony included data that outlined 12- month timelines for industry to develop and produce products that comply with the new Technical Bulletin 603.

OBJECTION: Commentors **#21 and 22** are concerned that the adoption of TB 603 will invite the use of toxic chemicals in the production of fire resistant materials used in the manufacture of mattresses that will affect the health of factory workers.

ACTION: This objection is outside the scope of the Bureau. Safety issues regarding factory workers are the responsibilities of Cal OSHA and National Institute for Occupational Safety and Health.

Although the Bureau is very sensitive to the concern of everyone regarding the use of toxic chemicals in the production of consumer goods, we regulate performance standards and do not make recommendations regarding the components used in the construction of products. Many of the available materials for meeting an open-flame standard for mattresses have been in the market for 25 years for use in public occupancies and have prevented numerous fire deaths and injuries. Current worker safety and environmental laws in the United States address worker and consumer exposure to chemicals. No chemical may enter the US market without extensive assessment and testing. In addition, many of the materials developed for use in this standard are fire-blocking barrier fabrics not in contact with the human body and present minimal environmental exposure hazards to workers or consumer.

Numerous suppliers testified at the public hearings that their products are non-toxic and environmentally safe.

E. Letters and/or oral testimony from the following companies with the same recommendation:

23. **AFT Barrier Fabrics, Peter Philips, Managing Director**
24. **American Kynol, Inc. Joseph S. Hayes, Jr., President**
25. **ELK Corporation, Lou Hahn, Technology Center Manager**
26. **Fortafil Fibers, Roger Prescott and James M. Clark**
27. **Glo-Tex International, Inc., Pete McGill, Product Development Manager**
28. **Inman Mills, Norman Chapman, Executive Vice President**
29. **Jones Fiber Products, Inc., Kenneth R. Oliver, President**
30. **Kanebo Gosen, Ltd, Tomen America, Inc., Sinzo Yamada and Nelson Honma**
31. **Kaneka Corporation, Mitsui Textile Corporation,**
32. **McKinnon-Land, LLC, Bob McKinnon, CEO**
33. **National Cotton Batting Institute, Tony Wolf, President**
34. **Solutia, Inc., Gary L. Petersen, Commercial Director**
36. **Teijin Twaron, USA, George Perkins**
37. **Zoltek Corporation, James M. Dean**
38. **Whitin Yarns and Fibers, James T. Whitin**

RECOMMENDATION: Commentors **#23-34** and **#36-38** produce fire-resistant components that can be used in the construction of mattresses to comply with the proposed TB 603. The companies are suppliers of fire-resistant sewing threads, flame-blocking fabrics, fire barrier products, flame-resistant fiber, and fire barrier fabrics.

These commentors urge the Bureau to make the new standard effective on January 1, 2004 because they have large quantities of product available to the mattress manufacturing industry for use in product that will be compliant with the standard. They state that since the Governor signed AB 603 in 2001, they have spent large sums of money to capitalize new factories and production plants, hire new employees, design, manufacture and test products that will provide the mattress industry with the components needed to comply with TB 603. They state a delay in the adoption of the regulation for whatever reason will cause them financial hardship.

ACTION: The Bureau applauds the efforts of the supply industry to provide the products necessary for the mattress industry to comply with TB 603. However, the decisions the Bureau must make regarding the regulations are not based on the capital commitments made by industry, but by a responsibility to improve fire safety for California consumers in the most expeditious manner under the requirements of the law.

35. Spectrum Resource Associates, LLC,

RECOMMENDATION: Commentor **#35** encourages the Bureau to consider the current and imminent fire resistant technology in regard to topical treatments and applications.

ACTION: The Bureau regulates performance standards for fire safety and does not specify product components or how to construct products for compliance.

F. Letters and/or oral testimony from:

**39. International Furniture Rental Association,
Frederick von Unwerth, General Counsel.**

RECOMMENDATION: Commentor **#39** recommends the proposed language be modified to include an effective date and the phrase, “manufactured for sale in California” so that there is a clear delineation between the product that must comply and the product manufactured prior to the effective date.

ACTION: The recommendation has been acknowledged by modifying the proposed language to include a subsection specifically identifying a revision of the currently required law label stating that the mattresses, futons, and box spring sets manufactured for sale in California are TB 603 compliant. The revised label also includes language requiring the month and year the product is manufactured to comply with United States Government Standard for Flammability of Mattresses 16 CFR 1632, “Standard for the Flammability of Mattresses and Mattress Pads”, and 16 CFR 1632.31, subdivision (b)(3).

RECOMMENDATION: Commentor **#39** is concerned with inventory that has been manufactured prior to the effective date of TB 603 and whether his clients will no longer be able to rent existing inventory.

ACTION: There is nothing in the proposed regulation that indicates existing inventory cannot be sold, or rented. The legislation requires that all mattresses and box springs manufactured after January 1, 2004 must meet an open flame standard specified by the Bureau.

G. Letters and/or oral testimony from the following regarding miscellaneous issues:

**40. American Textile Manufacturers Institute
41. National Cotton Council of America**

OBJECTION: Commentors **#40** and **#42** both submitted letters refuting the public comments made by Gene Livingston, Livingston & Mattesich Law Corporation, representing The International Sleep Products Association and The Sleep Products Safety Council. Both association representatives contend that Mr. Livingston implied that the textile bedding manufacturers have made no effort to address the issue of open-flame ignition of mattresses and bedding and cited examples to the contrary.

ACTION: The Bureau duly notes the concerns of commentors **#40** and **#42** and acknowledges their efforts to improve the safety of mattresses and bedclothing in compliance with AB 603 to protect California consumers.

43. E. T. Freet

RECOMMENDATION: Commentor **#43** suggests that the Bureau does not have enough inspectors to properly apply the new law; that the Bureau provide a cutoff time for industry to comply, which includes identifying out of state and out of country manufacturers for compliance.

ACTION: The Bureau's enforcement policies are outside the scope of the proposed regulations.

RECOMMENDATION: Commentor **#43** suggests the Bureau test the barriers in today's market and publish the findings for the industry.

ACTION: The Bureau regulates performance standards and does not make recommendations regarding the components used in the construction of products.

44. Culp Home Fashions

RECOMMENDATION: Commentor **#44** makes general statements regarding their company's attempt to test various products that will comply with TB 603. They make no specific recommendations about the proposed language

ACTION: The commentor's remarks are not specific to the proposed language, but rather opinions on the various fire resistant components available in the market.

45. National Association of State Fire Marshals

RECOMMENDATION: Commentor **#45** addressed the six principles that all fire safety standards must meet as developed by the Science Advisory Committee in relation to the new open flame standard for mattresses, box springs and futons. The principles and the commentor's responses follow:

- Principle 1: The standard addresses a recognized or potential fire hazard.

Response: NASFM believes the proposed standard meets this first principle.

- Principle 2: The standard must be based on current scientific knowledge about how finished products perform in the real world.

Response: NASFM believes the protocol and burner used in the proposed standard are grounded in current science, but would like more information on why the Bureau proposes a 60 minute test duration rather than a 30 minute test duration.

- Principle 3: The acceptance criteria are capable of affecting a reduction in the target hazard. It is reasonable to expect a reduction in fire losses.

Response: NASFM believes the proposed standard meets this principle.

- Principle 4: Compliance with the standard must be technologically and economically practicable.

Response: NASFM believes the proposed standard is technologically practicable, however, they are concerned that it will be economically feasible as well and will be interested in the public record as it unfolds.

- Principle 5: The complying product should not create significant health, safety or environmental risks.

Response: NASFM questions whether the proposed standard adequately meets this principle, but is confident that safeguards (US EPA) are in place to ensure that it will.

- Principle 6: Widespread industry conformance to the standard must be achievable to assure a level playing field for all manufacturers.

Response: NASFM believes the proposed standard will contribute significantly to this principle and set the stage for mandatory federal standards.

In conclusion, NASFM noted that if it were forced to make a decision at this time, they would support the standard exactly as written.

RECOMMENDATION: After the first public hearing in San Francisco, the NASFM submitted additional comments for the public record in response to the testimony of others.

ACTION: The commentor's remarks are general in nature and do not require response by the Bureau other than to state that the concern with the 60 minute test duration has been addressed in the 15-day Notice of Modified Text. The issue of economic feasibility for industry was addressed by the number of suppliers, (Commentors 23 through 38), who submitted testimony to the Bureau stating that they have available and cost efficient products that have been developed for use in complying with the proposed standard.

46. California Fire Chiefs Association

RECOMMENDATION: Commentor **#46** made favorable comments regarding the proposed standard and encouraged its implementation, as is written, as soon as possible.

ACTION: Based upon the comments and data received during the public comment phase of the rulemaking, the implementation date for the new standard will be January 1, 2005 as noted in the 15-day Notice of Modified Text. Testimony included data that outlined 12- month timelines for development and production of product that complies with the new Technical Bulletin 603.

RECOMMENDATION: Commentor **#46** recommended that the bedclothing regulations be implemented quickly.

ACTION: Technical Bulletin 604, entitled "Requirements and Test Procedures for Resistance of Bedclothing Products to Open-Flame", is currently being developed by the Bureau and the rulemaking will be noticed in September 2003. The Bureau is mindful of the legislative mandate to promulgate regulations for both mattresses and bedclothing and is coordinating the adoption of both regulations. The Bureau has insufficient space, equipment and employee resources that make it difficult to gather effective scientific data on both mattresses and bedclothing at the same time. The Bureau has been working with both mattress and bedclothing task force members to include all stakeholders in the process and develop standards that meet the requirements of the law and do not unduly burden the industry or provide unsatisfactory products for the consumer.

RECOMMENDATION: Commentor **#46** recommended that if a federal waiver is necessary to implement the regulations, then it also should be filed as soon as possible.

ACTION: While the Bureau recognizes the potential issue with a federal exemption, legal opinions on the subject are varied. Therefore, the Bureau is considering its course of action.

48. Royal Mattress, Ron Hoestery

RECOMMENDATION: Commentor **#48** urges the Bureau to develop a certification standard for components used in production by the manufacturers to ensure compliance with TB 603.

ACTION: This recommendation was rejected because the Bureau regulates performance standards and does not make recommendations regarding the components used in the construction of products.

RECOMMENDATION: Commentors **#48** and **#51** ask the Bureau to include air mattresses as amenable products regulated by TB 603.

ACTION: This recommendation was rejected because there is no authority in statute to include air mattresses or water mattresses in the requirements of the proposed standard unless a concealed filling material is present between the outer fabric and the bladder.

49. Custom Rest Bedding, Steve Carwile

RECOMMENDATION: Commentor **#49** recommends the bedclothing regulations be enacted before the mattress/box springs regulations.

ACTION: This recommendation was rejected because the Bureau has insufficient laboratory space, equipment and employee resources to gather effective scientific data on both mattresses and bedclothing at the same time. The Bureau is mindful of the legislative mandate to promulgate regulations for both mattresses and bedclothing and is coordinating the adoption of both regulations. Technical Bulletin 604, entitled "Requirements and Test Procedures for Resistance of Bedclothing Products to Open-Flame", is currently being developed by the Bureau and the rulemaking will be noticed in September 2003. The Bureau has been working with both mattress and bedclothing task force members to include all stakeholders in the process and develop standards that meet the requirements of the law and do not unduly burden the industry or provide unsatisfactory products for the consumer.

RECOMMENDATION: Commentor **#49** is concerned with the imported products that are sold in California meeting the requirements of TB 603 and the small number of inspectors available to enforce the law.

ACTION: The Bureau's enforcement policies are outside the scope of the proposed regulations.

51. Eastman House of California, Neil Friedman

RECOMMENDATION: Commentor **#51** expresses concern about the floor samples currently in the marketplace and the liability if they are sold after the effective date of the proposed regulation.

ACTION: AB 603 requires all mattresses and box springs manufactured after January 1, 2004 must be resistant to an open flame standard developed by the Bureau. The mattresses and box springs currently in the marketplace, including floor samples, are not required to comply with the new standard.

52. AMF Support Services, Kara Johan

RECOMMENDATION: Commentor **#52** discussed concerns regarding over regulation of long-term health facilities and the expense to comply with TB 603.

ACTION: The Bureau is writing language to include a sprinkler exemption in the bedclothing regulations that will include mattresses, and box spring sets as directed by AB 603. The exemption will be limited to hotel, motels and boarding houses and similar transient occupancies, as specified in and defined by California 2001 Building Code, Chapter 9, Section 904.2.1.

54. Chestnut Ridge Foam, Inc, Carl Ogburn

RECOMMENDATION: Commentor **#54** recommends deleting the word “Residential” from the proposed title and language of TB 603.

ACTION: This recommendation was accepted and the proposed action was modified to delete the word “residential” from the title of the Technical Bulletin and the applicable paragraph (Section 1371) of the proposed language.

RECOMMENDATION: Commentor **#54** suggests that the proposed language be modified to clarify the term, “all mattresses sold in California” with suggested language, “all mattresses sold in California and mattresses sold elsewhere for use in California”.

ACTION: This recommendation was rejected because the standard addresses all mattresses sold in California for any purpose or building type. The term “sell” as defined in B&P Code, Division 8, Chapter 3, section 19003 (Home Furnishings and Thermal Insulation Act) covers all means by which mattresses are amenable to the law.

RECOMMENDATION: Commentor **#54** suggests the regulation “**NOT**” exempt establishments with automatic fire extinguishing systems.

ACTION: This recommendation is rejected because the Bureau sees no reason to drop the sprinkler exemption because of problems with some types of sprinklers. Sprinklers have been shown generally to be a major fire safety enhancement in either residences or public buildings. TB 603 references the most current sprinkler code. One would assume that any sprinkler recall would not allow long windows of time in which no sprinkler capacity would be allowed in public occupancies.

RECOMMENDATION: Commentor **#54** suggests that Section 5 of the test protocol include language that requires manufacturers to select components with stable fire-performance characteristics and seek validation from bedding component suppliers to that effect.

ACTION: This recommendation is rejected because the selection of mattress components that survive the life of the mattress is not meant to be regulatory but a general note of caution. While the regulation is to be met only at the time of production and sale of the product, long-term efficacy improves consumer safety. One method of compromising fire resistance, washing or dry-cleaning, is unlikely to occur with mattresses and box springs. Likewise, it is the intent of the law that suppliers should not test one component and sell a different (less effective) component to mattress manufacturers. Good quality control of raw materials is essential and is best handled for a composite standard by effective enforcement, not recommendation statements without force of law.

RECOMMENDATION: Commentor #54 recommends adding the kilowatt output for each individual burner on page 9 of the test criteria.

ACTION: This recommendation was accepted. The proposed action was modified by adding the kilowatt output for each individual burner into the test criteria.

55. GBH International, Marcelo Hirschler

RECOMMENDATION: Commentor #55 expresses concern that the proposed TB 603 is not of suitable severity on the following points:

1. Use the TB 129 burner technology instead of the NIST dual-burner.

ACTION: NIST burner was chosen because the technology is based on sound research and applies a top flame, mirroring burning bedclothing (comforter, bedspread, mattress pad or pillow).

2. Use the 100 kilowatts peak heat release as failure criteria.

ACTION: The peak heat release rate will be moved from 150 kilowatts as originally proposed to 200 kilowatts. Assumptions made for use of stringent 100 kilowatts criteria in prison mattresses do not apply in home environments. Also, most mattresses that pass the test exhibit a peak heat release rate of approximately 50-100 kilowatts anyway, well below the 150-250 range.

3. Melting and dripping should constitute a criterion for failing the test criteria.

ACTION: To use this criteria would completely eliminate the use of mattress tickings that consumers demand for comfort and aesthetics and would severely impact the residential bedding industry. It is a given that certain components of a mattress or foundation will burn and melt and can lead to secondary ignitions unless a mattress set is made from very high performing, almost "fireproof" components. But a home environment is different than a prison or other public occupancy and involves a lower risk of arson or intentionally set fires. Thus, one cannot make home products to the same level of flame resistance as those found in public buildings. Given the need for some aesthetic features in residential bedding, some level of flammability must be allowed in these products. Also, tickings used on mattress surfaces must be designed to be smolder resistant and tend to have high synthetic fiber contents. But since most mattress tickings tend to be of lower basis weights than upholstery (furniture) fabrics, some burning off of these tickings can occur in an open flame test and not exceed the heat release criteria. The amount of foam or other filling between the surface ticking and the barrier is a greater factor in potential test failure because assemblers may chose to use non flame-resistant foams and other specialty fillings in this layer and these components contain more fuel than the actual tickings. So the fills above the barrier represent a larger hazard than the meltable ticking themselves.

4. Continue using the proposed end point criterion.

ACTION: Test will be continued until 1) self-extinguishment (no visible burning), 2) flashover or 3) 30 minutes has elapsed.

5. The peak heat release rate of 150 kilowatts in the test criteria is excessive.

ACTION: To limit the peak heat release rate to 100 kilowatts will not allow any comfort engineering to be incorporated into mattresses, as stated above.

6. Choices of bedding is a variable in the test criteria.

ACTION: What types of bedding consumers chose to use in various California climates is not relevant in this rule. Also, bedding flammability is being addressed in a separate standard. The only issue is improvement of the mattresses resistance to burn and thus move to flashover.

7. Comment regarding the mattresses built in the United Kingdom being superior to those in the United States.

ACTION: No specific issue cited. Mattress construction and choices of materials that lead to compliance will be left to the market once the TB 603 is implemented.

8. Increase the time of application of the ignition source to 120 seconds.

ACTION: BHFTI will use the times of flame application as set in the NIST research. A 120 to 180-second flame (as with TB 129) will apply a stronger fire insult to the burner zone. However, once the burner is removed, performance is based on the following important factors: 1) the level and duration of flame insult on the other surface areas of the mattress and foundation away from the localized burner zone, and 2) the burn propagation rate across the entire bed set.

56. IKEA, Magnus Bjork

RECOMMENDATION: Commentor #56 recommends:

1. That ample time be provided prior to the implementation date in order to coordinate and secure compliance in a cost effective way

ACTION: Based upon the comments and data received during the public comment phase of the rulemaking, the implementation date for the new standard will be January 1, 2005 as noted in the 15-day Notice of Modified Text. Testimony included data that outlined 12-month timelines for development and production of product that complies with the new Technical Bulletin 603.

2. That the Bureau coordinate implementation dates for TB 603, TB 604 and the revision of TB 117

ACTION: This recommendation was rejected because it is impossible to revise and implement all three standards at once due to statutory mandates and limitations on Bureau resources. Attempts will be made to coordinate as closely as possible so that maximum safety improvements are realized for the home environment. TB 604 is a test only for bedclothing accessories and therefore does not include sofa beds.

3. A clarification of amenable products.

ACTION: The TB 603 regulation applies to all sleep surfaces as defined in the Bureau statute and regulations and in the federal cigarette standard for mattresses, futons and mattress pads, 16 CFR 1632. These include crib, cradle and other infant mattresses. Further clarification of amenable products will be made by policy at a later date.

4. Exclude the following types of mattresses from the regulation:

- a) One-of-a-kind (custom made) mattresses and mattress pads.

ACTION: “One of a kind” prescription mattresses and mattress pads are already excludable per 16 CFR 1632, if criteria for exclusion can be met. Bureau policy on this will follow federal regulation.

- b) Sofa bed mattress tests

ACTION: The mattress portion of sofa beds will be amenable, if the mattress can be completely removed. But sofa beds containing a permanently attached mattress can be excluded from TB 603 per 16 CFR 1632.1, subsection 2.

- c) Crib and Cradle mattresses

ACTION: Since infants and children represent a highly vulnerable demographic group, these should not be excluded from TB 603 compliance. While it is true that some smaller mattresses may pass TB 603 due to low heat output, the Bureau still has a concern with the fire and burn potential they represent. In the best case, though not required by this law, a flame-blocking barrier could be used to minimize or prevent direct flame contact with infants.

RECOMMENDATION: Commentor #56 made a variety of technical recommendations and suggestions as follows:

1. Modification of the test frame, with methods and definitions to allow testing of additional product types.
2. Change the height setting for the vertical burner.
3. Add netted platform for testing small or flexible mattresses to prevent sagging or falling through the frame.
4. Develop a separate box spring test.
5. Add a method to test a box spring without a mattress.
6. Clearly state that the whole use surface shall be equally well fire protected.

ACTION: The Bureau acknowledges the recommendations of the commentor. The Bureau is not required to address every possible contingency in this particular regulation, however, once the TB 603 test standard is implemented, other new information will be learned from third party test laboratories and manufacturers doing research and development. Although this standard as written results in a significant increase in bedroom fire safety for California consumers, the Bureau understands that as more knowledge is gained it may be advisable to modify or expand the scope of the flammability regulations in the future. When developing a new standard, good science requires a continual refinement of test procedures to enhance the accuracy, repeatability and reproducibility of test data so that the standard best reflects improvements in product performance.

RECOMMENDATION: Commentor #56 also posed some technical questions with no suggestions as follows:

1. How to test reversible mattresses

ACTION: Since different sleep surfaces may have different fire performance, testing of both sides of these mattresses in separate tests is advised.

2. How to test a three-piece set.

ACTION: Regardless of the specific number and thickness of pieces making up the mattress set or the total thickness of the complete set, the test should be performed as prescribed with the burner spacing as outlined in the protocol as reference.

3. Definition of mattress pad vs. mattress

ACTION: Rather than prescribe this solely by thickness, the Bureau will rely on additional criteria such as intent of use, advertising, etc. as stipulated in both federal and California regulations. In some cases, specific products will be defined by policy review prior to testing. A mattress or sleep surface should offer some resiliency and support and not just act as a protective cover. A mattress pad may offer support but its primary function is protection of the mattress. It is not the primary sleep surface.

4. Define additional products currently in the market.

ACTION: The TB 603 regulation applies to all sleep surfaces as defined in the Bureau statute and regulations and in the federal cigarette standard for mattresses, futons and mattress pads, 16 CFR 1632. These include crib, cradle and other infant mattresses. Further clarification of amenable products will be made by policy at a later date.

5. Change “tape edge” to “lower edge” (footnote 9, page 10)

ACTION: The Bureau incorporated this change in the 15-day Notice of Modified Text.

6. Marking and labeling mattresses vs. sets

ACTION: Normally mattresses will be tested as sets. The Bureau is amending the mattress and box spring law labels to require a statement of compliance with TB 603 on each label. Reversible mattresses will be assumed to comply when tested on both sides.

57. Ventex, Harrison Murphy

RECOMMENDATION: Commentor **#57** recommends that the Bureau formally remove the specified occupancies from the exemption to the law, or clearly indicate that only hotel/motel occupancies are exempted from this law.

ACTION: This recommendation is rejected because how mattress manufacturers chose to comply with sales to public buildings with sprinkler systems is between the manufacturer, the occupancy owners and the fire marshal having jurisdiction. The Bureau has no authority to specify sprinkler standards or to inspect public buildings. This is the responsibility of the State Fire Marshal. Once the regulation allowing the sprinkler exemption is written, it will reflect the current California sprinkler standard for live-in public occupancies.

Language in AB 603 relating to the sprinkler exemption can only be removed by a statutory change by the California legislature. The Bureau is writing language to include a sprinkler exemption in our regulations. The exemption will be limited to hotel, motels and boarding houses and similar transient occupancies, as specified in and defined by 2001 California Building Code, Chapter 9, Section 904.2.

RECOMMENDATION: Commentor **#57** recommends that the Bureau eliminate the word “Residential” from the title of TB 603.

ACTION: This recommendation was accepted and the proposed action was modified to delete the word “residential” from the title of the Technical Bulletin and the applicable paragraph (# 1371) of the proposed language.

RECOMMENDATION: Commentor **#57** recommends that the Bureau add a graphic depiction of the burner placement for a mattress only test scenario to Figure 9 of the TB 603.

ACTION: The Bureau acknowledges the recommendation of the commentor. The Bureau is not required to address every possible contingency in this particular regulation, however, once the TB 603 test standard is implemented, other new information will be learned from third party test laboratories and manufacturers doing research and development. Although this standard as written results in a significant increase in bedroom fire safety for California consumers, the Bureau understands that as more knowledge is gained it may be advisable to modify or expand the scope of the flammability regulations in the future. When developing a new standard, good science requires a continual refinement of test procedures to enhance the accuracy, repeatability and reproducibility of test data so that the standard best reflects improvements in product performance.

RECOMMENDATION: Commentor **#57** recommends that the Bureau preserve the peak heat release rate criteria at 150 kilowatts and preserve the test duration at a minimum of one hour.

ACTION: The recommendation is rejected for the reasons stated on pages 1 and 2 of this document based on the public hearing testimony and written comments.

RECOMMENDATION: Commentor **#57** recommends that the Bureau require multiple test submissions for prototypes be made if the peak heat release rate requirement is relaxed above 150 kilowatt or if the test duration is shortened to less than 1 hour. In the event of either change, that actual prototype testing be made a requirement of the standard and a condition of sale in California.

ACTION: The Bureau believes that, while multiple testing increases the likelihood of compliance, the additional test costs passed on to consumers may not be warranted. Compliance with a similar full-scale standard for furniture, TB 133, has been achieved without mandatory prototype testing.

Because TB 603 is a new minimum standard for all mattresses and mattress sets sold in California, the Bureau also believes that proactive testing of new prototypes (with repeated tests) offers the highest level of assurance of good quality control and improved safety. This can be accomplished with ongoing industry and consumer education.

58. Burlington House, Ron Farris

RECOMMENDATION: Commentor **#58** expresses concerns regarding the different strategies used to attain compliance of mattress tickings with TB 603.

ACTION: It is impossible for ticking or any other component of a mattress/foundation set to comply with TB 603. Due to the nature of the test and the failure criteria set, any component of the mattress may contribute to burn and produce heat release as long as the total system does not exceed the stated heat release criteria. Mattress assemblers tell the Bureau that they design their products to include some “sacrificial” layers (used for comfort and aesthetics) that will burn. Included in the “sacrificial” components may be surface ticking and pillow top padding made of polyurethane foam or some other specialty material. To imply that mattress ticking (fire retardant treated or otherwise) has been tested to TB 603 by itself is confusing, unless one states that it was tested with a particular mattress containing specific fills, etc. If the outer mattress ticking is

assumed to be the only type of flame barrier allowed, the Bureau admits that reformulating the ticking to be fire-resistant may be difficult. But other strategies are available, including flame-resistant barrier below the ticking and fire-resistant fillings.

59. John W. Michener

RECOMMENDATION: Commentor **#59** recommends that the Bureau make minor editorial changes to the language text for consistency in use of the terms, fire retardant or flame retardant and fire resistant or flame-resistant. The commentor suggests that consistent use of the term fire resistant or flame-resistant would conform to accepted American Society for Testing and Materials (ASTM) terminology.

ACTION: The Bureau is aware of the difference in the use of the terms, fire/flame retardant or fire/flame-resistant, however, since they are not used in the proposed language or the test criteria, no changes are necessary. The words are only used in the Initial Statement of Reason that is background material.

Comments Regarding 15-Day Notice Modified Language and Test Criteria.

The Bureau received a number of written comments on the changes and additions in the proposed language and test criteria as summarized below. Each commentor was assigned a number for brevity in identification throughout the document.

A. Written testimony from the following companies with the same recommendations:

1. **State of Connecticut Department of Consumer Protection, Product Safety and Bedding Unit, Joan Jordon, Supervisor**
2. **International Association of Bedding and Furniture Law Officials, Inc., William A. Cale, President**
3. **State of Pennsylvania Bedding & Upholstery Section, Sharon Lawson, Chief**
4. **State of Utah, Bedding, Upholstered Furniture, Quilted Clothing, Claudia Gale, Program Manager**
5. **State of Virginia, Department of Health, Bedding & Upholstered Furniture Inspection, Margaret Davis**

20. IKEA, Magnus Bjork, Laws and Standards Compliance Manager

RECOMMENDATION: Commentors **#1-5** and **#20** are concerned that the proposed law label does not comply with the recommendations of the International Association of Bedding and Furniture Law Officials, Inc., nor does it match law labels required by other states.

ACTION: The International Association of Bedding and Furniture Law Officials (IABFLO) is an organization made up of agencies who are responsible for the enforcement of consumer oriented bedding and furniture laws in their respective states. The members serve in an advisory capacity to promote uniformity in laws, regulations, enforcement procedures, test methods and terminology within the various regulatory programs. Their decisions and recommendations have no force of law.

Historically, there have been numerous state laws inconsistent with each other. The Bureau is sensitive to this situation and works with other states to promote harmonized standards. However, the proposed modification of the law label by the Chief, as authorized in the Bureau of Home Furnishings and Thermal Insulation Act, Article 5, Section 19081, is consistent with the need to comply with federal labeling requirements, provides necessary information for consumer disclosure, and enforcement of the new standard.

The proposed law label format conforms to all other law labels that the Bureau requires on products sold in California. The Bureau has a precedent label, Type No. 8 in CA Code of Regulations, Title 4, Section 1126, Official Law Label Requirements, that specifies compliance with Technical Bulletin 117 for bulk materials or filling materials in loose form.

B. Written testimony from the following companies with the same recommendations:

- 6. United Furniture Workers of America, AFL-CIO/CLC, Ulises Vergara, Secretary/Treasurer**
- 7. Sit 'n Sleep, Lawrence Miller, President**
- 8. Mattress Land, Inc., John Gregg, President**
- 9. Dupont Advanced Fibers Systems, William J. Harvey, Vice President and General Manager**
- 10. SEALY, Inc., Richard D. Martland, Nielsen, Merksamer, Parrinello, Mueller & Naylor, LLP**
- 11. Simmons Company, Emily Kennedy, Paul, Hastings, Janofsky & Waler, LLP**

RECOMMENDATION: Commentors **#6-11** support the modifications made to the language and test criteria and recommend promulgation of the proposed regulations as modified.

ACTION: The Bureau did not receive significant comments to warrant further changes in the proposed modified language or test criteria. The Bureau will proceed to finalize the rulemaking with the modified proposal.

C. Written testimony from the following companies with same recommendations:

- 13. Chestnut Ridge Foam, Inc, Chandra Jayakody, Ph.D., R&D Scientist**
- 15. Spectrum Resource Associates, Inc., Dennis Billings, President/CEO**
- 16. Chestnut Ridge Foam, Inc. Carl Ogburn, Executive Vice President**
- 17. ELK Corporation, Louis Hahn, Ph.D., Director, Technology Center**
- 18. The Felters Group, John Burns**
- 19. GBH International, Dr. Marcelo M. Hirschler**

RECOMMENDATION: Commentors **#13, 15, 16, 17, 18, and #19** do not support the modifications proposed in the 15-day Notice.

ACTION: The Bureau did not receive significant evidence or comments to warrant further changes in the proposed modified language or test criteria. The Bureau will proceed to finalize the rulemaking with the modified proposal.

RECOMMENDATION: Commentors **#13 and 16** also made some technical suggestions that have already been addressed in the 45-day Comments/Responses section of the Final Statement of Reasons.

RECOMMENDATION: Commentors **#19** makes recommendations that were both addressed in the 45-day Comments/Responses section of the Final Statement of Reasons and do not address the 15-day Notice modifications.

12. Children's Coalition, Whitney Davis

RECOMMENDATION: Commentor **#12** does not support the modifications made to the originally proposed language. He is concerned that the original standard has been weakened for political expediency and does not serve the interests or safety of California children.

ACTION: The modifications to the initially proposed Technical Bulletin 603 were based solely on the data and comments received during the regulatory 45-day public comment period. The additional comments and significant new data justified the changes proposed in the 15-day Notice.

14. California Hotel & Lodging Association, James O. Abrams, President/CEO

RECOMMENDATION: Commentor **#14** recommended exemption for sprinklered buildings.

ACTION: The Bureau is writing language to include a sprinkler exemption in the bedclothing regulations that will include mattresses, and box spring sets as directed by AB 603. The exemption will be limited to hotel, motels and boarding houses and similar transient occupancies, as specified in and defined by California 2001 Building Code, Chapter 9, Section 904.2.1.

RECOMMENDATION: Commentor **#14** recommends that the Bureau raise the peak heat release rate to 250 kilowatts to be consistent with the California Fire Code.

ACTION: The recommendation of a 250 kilowatts peak heat release rate was rejected because the Bureau believes it is too high. Proposed action was modified to a peak heat release rate of 200 kilowatts because the Bureau agrees with the data provided by the commentors that the 150 kilowatts peak heat release rate is conservative and can be raised while maintaining the safety levels of the test. The goal of the TB 603 standard is to better protect consumers in a home environment, specifically a bedroom environment. Homes are basically "unregulated" environments from a fire safety standpoint and contained large volumes of easily ignited combustibles, in intimate or close contact with each other. While no product fire standard can address every fire scenario, a conservative value for peak heat release rate was originally proposed by the Bureau to provide an added fire safety margin for consumers. Given the need to comply with the standard and the fact that there is a 20% tolerance in accuracy of measurement for this test, manufacturers should design their products to target approximately 160 kilowatts heat release.

National Fire Protection Association Life Safety Code 101 specifies a peak heat release rate of 250 kilowatts for mattresses used in health care occupancies. However, these facilities include state of the art sprinkler systems, smoke detectors, flame-resistant bedclothing, a limitation on the amount of combustibles, refined exit plans, and mandatory fire marshal inspections on a regular basis. These features are not usually present in the home environment, especially in the vulnerable populations of elderly and low-income. Thus, the Bureau modified the test criteria to 200 kilowatts because it will still provide an improvement in the fire safety of mattresses over the current product available in the market and will satisfy the industry's concerns.

RECOMMENDATION: Commentor #14 is concerned with the substantial costs on governmental entities and private businesses.

ACTION: These comments are not relevant to the proposed modifications.

20. IKEA, Magnus Bjork, Laws and Standards Compliance Manager

RECOMMENDATION: Commentor #20 is concerned about issues raised in comments during the 45-day public hearing period that were not addressed in the 15-day Notice.

ACTION: Commentor's issues have been addressed in the 45-day Comments/Responses in the Final Statement of Reasons.

21. The International Sleep Products Association and The Sleep Products Safety Council (Gene Livingston, Livingston & Mattesich Law Corporation)

RECOMMENDATION: Commentor #21 asked for clarification that the proposed label requirement supercedes any other mattress label requirements.

ACTION: The proposed regulation eliminates the flammability warning label currently required by California law for mattresses containing non-flame retardant polyurethane foam because maintaining that label conflicts with the new TB 603 label and the compliance statement. The previously required label is superceded by the proposed TB 603 law label with the compliance statement requirement as specified in section 1371 (d).

RECOMMENDATION: Commentor #21 requests that the proposed labeling requirement allow a manufacturer the option of placing the required statement either on the law label or another label or tag attached to the new mattress or box-spring.

ACTION: The Bureau rejects this recommendation because an alternate or optional location for compliance statements required by law cause confusion for the industry, the consumer and enforcement processes.

22. National Association of State Fire Marshals, Donald Bliss, President

RECOMMENDATION: Commentor #22 recommends that the rulemaking process be delayed until unsubstantiated reports of political interference be resolved.

ACTION: As the commentor states, reports of political interference in the Bureau's rulemaking process are unsubstantiated. The Bureau made decisions based upon good science, technical and economic feasibility, environmental friendliness, and creation of a level playing field for the mattress industry. The modifications to the initially proposed Technical Bulletin 603 were based solely on the data and comments received during the regulatory 45-day public comment period. The comments and significant data justify the changes proposed in the 15-day Notice.

RECOMMENDATION: The commentor requests a public meeting to discuss the science for changing the standard and the effective date

ACTION: A public meeting to justify changes is not part of the rulemaking process. The 15-day Notice comment period is designed for that purpose. The effective date for implementing the standard was changed to January 1, 2005 because testimony included data that outlined 12-month timelines for industry to develop and produce products that comply with the new Technical Bulletin 603.

23. International Furniture Rental Association, Rick von Unwerth, General Counsel.

RECOMMENDATION: Commentor #23 expressed concern that the 15-day Notice of modifications did not address the association's comments made during the 45-day public comment period.

ACTION: The commentor's recommendations made at the public hearing in San Francisco are addressed in the Final Statement of Reasons, page 15.